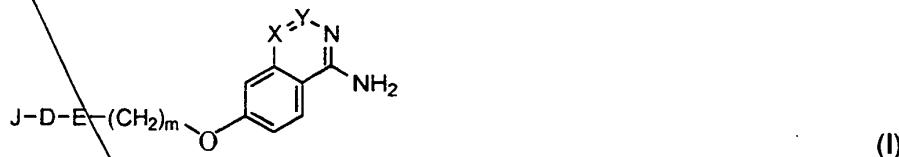


CLAIMS

1. Serine protease inhibitor having the formula (I),

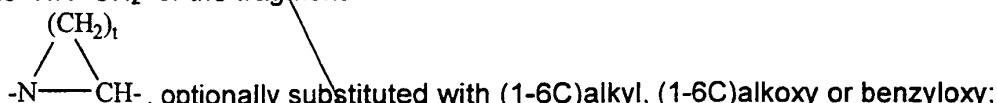
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in which

J is H, R¹, R¹-O-C(O)-, R¹-C(O)-, R¹-SO₂-, R³OOC-(CHR²)_p-,
(R^{2a},R^{2b})N-CO-(CHR²)_p- or Het-CO-(CHR²)_p-;

D is an amino-acid of the formula -NH-CHR¹-C(O)-,
-NR⁴-CH[(CH₂)_qC(O)OR¹]-C(O)-, -NR⁴-CH[(CH₂)_qC(O)N(R^{2a},R^{2b})]-C(O)-,
-NR⁴-CH[(CH₂)_qC(O)Het]-C(O)-, D-1-Tiq, D-3-Tiq, D-Atc, Aic, D-1-Piq or
D-3-Piq;
E is -NR²-CH₂- or the fragment



15 -N—CH—, optionally substituted with (1-6C)alkyl, (1-6C)alkoxy or benzyloxy;

R¹ is selected from (1-12C)alkyl, (2-12C)alkenyl, (2-12C)alkynyl, (3-12C)cycloalkyl and (3-12C)cycloalkyl(1-6C)alkylene, which groups may optionally be substituted with (3-12C)cycloalkyl, (1-6C)alkoxy, oxo, OH, CF₃ or halogen, and from (6-14C)aryl, (7-15C)aralkyl, (8-16C)aralkenyl and (14-20C)(bisaryl)alkyl, whereby the aryl groups may optionally be substituted with (1-6C)alkyl, (3-12C)cycloalkyl, (1-6C)alkoxy, OH, CF₃ or halogen;

20 R², R^{2a} and R^{2b} are each independently selected from H, (1-8C)alkyl, (3-8C)alkenyl, (3-8C)alkynyl, (3-8C)cycloalkyl and (3-6C)cycloalkyl(1-4C)alkylene, which can each be optionally substituted with (3-6C)cycloalkyl, (1-6C)alkoxy, CF₃ or halogen, and from (6-14C)aryl and (7-15C)aralkyl whereby the aryl groups may optionally be substituted with (1-6C)alkyl, (3-6C)cycloalkyl, (1-6C)alkoxy, CF₃ or halogen;

25 R³ is as defined for R² or Het-(1-6C)alkyl;

R⁴ is H or (1-3C)alkyl;

30 X and Y are CH or N with the proviso that they are not both N;
Het is a 4-, 5- or 6-membered heterocycle containing one or more heteroatoms selected from O, N and S;

m is 1 or 2;

p is 1, 2 or 3;

35 q is 1, 2 or 3;

Sub A⁵
t is 2, 3 or 4;
or a prodrug;
and/or a pharmaceutically acceptable addition salt and/or solvate thereof.

2. Serine protease inhibitor according to claim 1, wherein
m is 2; X is CH and Y is CH.
3. Serine protease inhibitor according to claim 2, wherein
J is H, R¹, R¹-SO₂, R³OOC-(CHR²)_p-, (R^{2a},R^{2b})N-CO-(CHR²)_p- or Het-CO-(CHR²)_p-;
- 10 D is an amino-acid of the formula -NH-CHR¹-C(O)-,
-NR⁴-CH[(CH₂)_qC(O)OR¹]-C(O)-, -NR⁴-CH[(CH₂)_qC(O)N(R^{2a},R^{2b})]-C(O)-,
-NR⁴-CH[(CH₂)_qC(O)Het]-C(O)-;
- 15 E is -N(3-6C)cycloalkyl-CH₂- or the fragment
$$\begin{array}{c} (\text{CH}_2)_t \\ | \\ \text{-N}-\text{CH}- \end{array}$$
, optionally substituted with (1-6C)alkyl or (1-6C)alkoxy;
- 20 R¹ is selected from (1-12C)alkyl, (3-12C)cycloalkyl and
(3-12C)cycloalkyl(1-6C)alkylene, which groups may optionally be substituted
with (3-12C)cycloalkyl, (1-6C)alkoxy or oxo, and from (6-14C)aryl,
(7-15C)aralkyl and (14-20C)(bisaryl)alkyl, whereby the aryl groups may
optionally be substituted with (1-6C)alkyl, (3-12C)cycloalkyl, (1-6C)alkoxy, OH,
CF₃ or halogen;
- 25 R² is H;
R^{2a} and R^{2b} are each independently selected from H, (1-8C)alkyl, (3-8C)cycloalkyl
and (3-6C)cycloalkyl(1-4C)alkylene, which can each be optionally substituted
with (3-6C)cycloalkyl or (1-6C)alkoxy and from (6-14C)aryl and (7-15C)aralkyl
whereby the aryl groups may optionally be substituted with (1-6C)alkyl,
(3-6C)cycloalkyl, (1-6C)alkoxy, CF₃ or halogen;
- 30 R³ is selected from H, (1-8C)alkyl, (3-8C)cycloalkyl and
(3-6C)cycloalkyl(1-4C)alkylene, which can each be optionally substituted with
(3-6C)cycloalkyl or (1-6C)alkoxy, and from (7-15C)aralkyl whereby the aryl
groups may optionally be substituted with (1-6C)alkyl, (3-6C)cycloalkyl,
(1-6C)alkoxy, CF₃ or halogen and from Het-(1-6C)alkyl;
- 35 p is 1;
q is 2;
t is 3 or 4.
4. Serine protease inhibitor according to claim 3, wherein

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Cont*

D is an amino-acid of the formula -NH-CHR¹-C(O)- or glutamyl [or an (1-6C)alkylester thereof];

5 R¹ is selected from (3-12C)cycloalkyl and (3-12C)cycloalkyl(1-6C)alkylene, which groups may optionally be substituted with (3-12C)cycloalkyl or (1-6C)alkoxy, and from (6-14C)aryl, (7-15C)aralkyl and (14-20C)(bisaryl)alkyl, whereby the aryl groups may optionally be substituted with (1-6C)alkyl, (3-12C)cycloalkyl, (1-6C)alkoxy or halogen; and

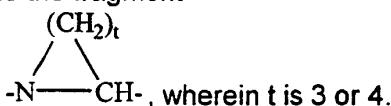
10 R³ is selected from (1-8C)alkyl and (3-8C)cycloalkyl, which can each be optionally substituted with (3-6C)cycloalkyl or (1-6C)alkoxy, and from (7-15C)aralkyl whereby the aryl groups may optionally be substituted with (1-6C)alkyl, (3-6C)cycloalkyl, (1-6C)alkoxy, CF₃ or halogen and from Het-(1-6C)alkyl.

DEPARTMENT OF PATENTS
5. Serine protease inhibitor according to claim 4, wherein

15 J is -CH₂COO(1-6C)alkyl, (3-8C)cycloalkyl, -SO₂-10-camphor, -CH₂CONHphenyl or -CH₂CONH(3-8C)cycloalkyl;

D is D-cyclohexylalaninyl, D-phenylalaninyl, D-diphenylalaninyl or glutamyl [or an (1-6C)alkylester thereof]; and

E is the fragment



20 6. A pharmaceutical composition comprising the serine protease inhibitor of any one of claims 1 to 5 and pharmaceutically suitable auxiliaries.

7. The serine protease inhibitor of any one of claims 1 to 5 for use in therapy.

25 8. Use of the serine protease inhibitor of any one of claims 1 to 5 for the manufacture of a medicament for treating or preventing thrombin-mediated and thrombin-associated diseases.

*add
A2*